

United States
Department of
Agriculture

Amendments to
Brucellosis Eradication
Uniform Methods and Rules

Animal and
Plant Health
Inspection
Service

Effective June 15, 1985

Veterinary
Services

request approval from the Deputy Administrator, Veterinary Services, APHIS, and justify the need. Where approved, quarantined pastures may receive only intrastate cattle and may not involve interstate movements except to slaughter or quarantined feedlots. An intensified eradication effort which produces large numbers of exposed or adult vaccinated animals needing the grazing period to reach slaughter condition would be an acceptable justification. All animals in the quarantined pasture shall be classified as exposed to brucellosis. The quarantined pasture shall be for the purpose of utilizing available forage to grow or to improve flesh condition of cattle. There shall be no breeding or "two-way" cattle allowed in the quarantined pasture. Sex shall be the same (e.g., all cows or all bulls except that neutered animals may share the quarantined pasture). All animals except steers and spayed heifers must be permanently identified with a hot iron "S" brand either on the left jaw or high on the tailhead (over the fourth to the seventh coccygeal vertebrae) upon entering the quarantined pasture). All animals except steers and spayed heifers leaving the quarantined pasture must move only for immediate slaughter or to a quarantined feedlot. The movement shall be in accordance with established procedures for handling quarantined (exposed) animals (See Part II, M) including issuance of "S" brand permits prior to movement.

The animal health official shall establish procedures for accounting of all animals entering or leaving the quarantined pasture. Approval of a quarantined pasture shall not exceed a period longer than 10 months. All exposed cattle must vacate the premises on or before the expiration of approval. Community notification shall be made of the presence of a quarantined pasture.

- K. "S" Branded Cattle Cattle which have been identified by branding with a hot iron the letter "S" (at least 2x2 inches) placed on the left jaw or high on the tailhead (over the fourth to the seventh coccygeal vertebrae). "S" branding is required for exposed cattle and for untested test-eligible cattle, originating in Class B or Class C States or areas and quarantined areas, to move in marketing channels from farms or markets to quarantined feedlots (Part I, I), to quarantined pastures (Part I, J), or to immediate slaughter if moved by rail or motor carriers. Testing of test-eligible cattle is recommended in lieu of "S" branding. Finished fed heifers moving in marketing channels directly to slaughter will be exempted from the "S" branding requirement.

L. Permit

1. Permit--As used in these rules, except for the terms "permit for entry" and "S" brand permit, a permit shall

mean an official document (VS Form 1-27 or comparable State form) issued by a Veterinary Services representative, State representative, or accredited veterinarian which is required to accompany "B" branded cattle and bison (or exposed cattle and bison moved under official seal). It will list one of the following: the identification tag, tattoo, USDA backtag, registration number, or similar identification. It will also list the reactor tag number, owner's name and address, origin and destination locations, number of cattle covered, and the purpose of the movement. If a change in destination becomes necessary, a new permit must be prepared. No diversion from the permitted destination is allowed. Distribution of the copies is printed on the official document and must be followed.

2. Permit for entry--As used in these rules, a permit for entry shall mean a premovement authorization for entry of cattle into a State from the animal health official in that State. The authorization will state the conditions under which movement may be made, and these conditions may be in addition to the requirements of these UM&R and Code of Federal Regulations.
3. "S" brand permit--As used in these rules, an "S" brand permit shall mean any document which is required to accompany animals in marketing channels having a restricted destination. It must show the origin, the destination, the number of restricted cattle, the purpose of the movement, the USDA backtag numbers (when applied serially, only the beginning and the ending number need be recorded), and a statement certifying to the "S" brand identification. It shall be prepared at the point of origin by an accredited veterinarian, a representative of the animal health officials, or a designated official at a quarantined feedlot. A copy of this "S" brand permit shall be immediately sent to the State animal health official with the original accompanying the animals. The original shall be delivered at the destination and retained at that location for a minimum of 6 months.

M. Official
Eartag

An official eartag is a USDA approved identification eartag (metal, plastic, or other) conforming to the nine-character alpha-numeric National Uniform Eartagging System and of appropriate color (e.g., orange for vaccination.) It provides unique identification for each individual animal. No duplication of the alpha-numeric identification will be used for metal, plastic, or other tags.

N. Market Test
Animals

Market test animals are test-eligible animals (Part I, D, 2) moving in trade through auction markets, stockyards, or to slaughtering establishments; also they are those animals

assembled at farms or ranches that are being readied for immediate movement to markets, stockyards, or slaughtering establishments or other sales. Such animals shall be identified by eartag and/or backtag to the herd of origin prior to or at the first point of concentration in marketing channels.

O. Approved
Brucella
Vaccine

A product that is approved by and produced under license of the U.S. Department of Agriculture for injection into cattle to enhance their resistance to brucellosis.

P. Official
Vaccinate

1. Official calfhood vaccinate

- a. For States administering an approved reduced dosage Brucella abortus Strain 19 vaccine containing at least 3 billion and not more than 10 billion live cells with an optimum of 5 billion live cells per 2 ml dose: Female cattle of any breed or female bison vaccinated while from 4 through 12 months (120 through 365 days) of age with the optimum vaccination age of 5 months by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling.

Vaccinated animals must be permanently identified as calfhood vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

- b. For States utilizing (until December 31, 1984) an approved full dosage Brucella abortus Strain 19 vaccine containing a minimum of 25 billion live cells per 5 ml dose:

Female cattle of a dairy breed vaccinated by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling while from 2 through 6 months (60 to 179 days) of age. Female cattle of a beef breed or female bison vaccinated by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling while from 2 through 10 months (60 to 299 days) of age.

Vaccinated animals must be permanently identified as calfhood vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

2. Official adult vaccinate

- a. For States administering an approved Brucella abortus Strain 19 vaccine containing at least 300 million and not more than 1 billion live cells with an optimum of 500 million live cells per 2 ml dose: Female cattle of any breed or female bison vaccinated beyond the age limit for official calfhood vaccination by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine as instructed by the Veterinarian in Charge and the State animal health official and as a part of a "whole herd vaccination" plan authorized by the State animal health official and the Veterinarian in Charge.

Vaccinated animals must be permanently identified as adult vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

Q. Whole Herd Vaccination

With "whole herd vaccination," animals older than the age of official vaccination can be vaccinated under specific conditions with a reduced dose of vaccine. All eligible calves shall also be vaccinated and identified. (See Part II, R--Whole herd vaccination plan.)

R. Identification of Vaccinates

1. Calfhood vaccinates--Calfhood vaccinated animals shall be permanently identified as vaccinates by tattoo and by official vaccination eartag. (If already identified with an official eartag prior to vaccination, an additional tag is not required.) Vaccination tattoos must be applied to the right ear. The tattoo will include the U.S. Registered Shield and "V", which will be preceded by a number indicating the quarter of the year and will be followed by a number corresponding to the last digit of the year in which the vaccination was done. Official vaccination eartags shall be applied to the right ear. The eartag will include the State prefix and a "V", followed by two letters and four numbers which will individually identify such vaccinated animal. States which use a complete series of vaccination tags from "VAA" through "VZZ" in less than 15 years will use the State prefix and a letter "T" or "S" followed by two letters and four numbers. After 15 years States will reuse the "V" series of tags. Series of letters beginning with these two letters would be restricted for use on vaccination tags only. Individual animal registration tattoos or individual animal registration brands may be substituted for official eartags.
2. Over calfhood age--Animals which have been vaccinated over calfhood age in authorized "whole herd vaccination" shall be permanently identified as vaccinates by the following procedures:

- a. Brucellosis-affected herds and herds not Certified Brucellosis-Free but at high risk--By an open ended "V" hot brand on the right jaw or high on the hip near the tailhead, or by an official "AV" (adult vaccination) tattoo in the right ear preceded by the quarter of the year and followed by the last digit of the year, as well as the official eartags (or individual animal registration tattoo or individual animal registration brand) applied at the time of conducting the required preliminary blood test. Large-numbered, unique, plastic bangle tags are recommended to be used additionally and to be correlated on test records with the official eartag.
- b. Certified Brucellosis-Free Herds--By an official "AV" (adult vaccination) tattoo in the right ear preceded by the quarter of the year followed by the last digit of the year, as well as the official eartags (or individual animal registration tattoo or individual animal registration brand).

- S. Traceback of Reactors
1. Successful traceback of reactors--A successful traceback occurs when the premises or herd of origin of a market test reactor, including those animals identified as reactors on laboratory confirmation of market test, is located and the herd (as defined in Part I, F) is tested as is deemed necessary. Tracebacks to dealers, commission firms, and such are not considered successful tracebacks of reactors if the investigation ceases at that point and all possible herds of origin are not tested. "Soldout" herds to be considered as successful tracebacks shall be confirmed by documentation of slaughter and shall have no test-eligible cattle remaining. (See Part I, F, Herd.) Tracebacks to feedlots (Part I, H) are successful and are to be treated as a herd. Tracebacks to quarantined feedlots (Part I, I) and to quarantined pastures (Part I, J) are successful and are reported as traced to known reactor herds. A preentry test of test-eligible cattle is strongly recommended for cattle entering these quarantined feedlots and quarantined pastures.

2. Epidemiologic investigation of reactors--Every trace-back requires an epidemiologic investigation and follow-up as outlined in (a) and (b) below (including traces to "soldout" herds) to effectively locate and control the disease. This investigation must include the following:

- a. Reactors in marketing channels with positive CF, rivanol test, modified card test, or standard card test when it is the only test conducted, or appropriate supplemental test titers:
 - (1) Contact and/or adjacent herds shall be identified, recorded, and investigated.
 - (2) Blood test the herd of origin (Part I, F) unless the epidemiological investigation indicates that the titers are not caused by field strains of B. abortus. Where a blood test is not conducted, the representative of the cooperating animal health agencies will prepare a statement indicating this was discussed with the owner or his representative and listing the reasons the herd was not tested. The statement shall be signed by both parties and both parties shall retain a copy.
 - (3) In Class Free and Class A areas, all sales following the estimated date of onset of infection shall be traced and the herds of destination identified, recorded, and investigated for evidence of infection by testing. If not tested, an agreement as in (2) shall be made. In Class B and Class C areas, this will be carried out to the extent resources are available.
 - (4) If the herd is negative, the herd will be retested 30 to 90 days later if deemed necessary by the epidemiologist.
- b. Reactors in marketing channels which are not positive to the CF, rivanol test, modified card test, or supplemental tests: The owner shall be advised of these results by writing, by telephone, or by personal visit. A joint decision shall be reached to test or not to test the herd. Any decision not to test shall be documented. The herd shall be tested if reasonable doubt exists as to the reason for the serologic response, or if evidence of brucella infection is present, or if the status of contact or other neighborhood herds is questionable.

- T. Certified Brucellosis-Free Herd See Part IV.
- U. Exposed Animals Animals that are part of a known infected herd, or that have been in contact with brucellosis reactors in marketing channels for periods of 24 hours or periods of less than 24 hours if the reactor has recently aborted, calved, or has a vaginal or uterine discharge are considered to be exposed regardless of the blood test results and must be placed under quarantine and restricted pending slaughter or testing after return to herd of origin. (See Part II, M, for handling procedures.)
- V. Cattle The term cattle (genus Bos) includes all dairy and beef animals.
- W. Dealer
1. Any person engaged in the business of buying or selling livestock in commerce either on his own account or as the employee or agent of the vendor and/or purchaser, or
 2. Any person engaged in the business of buying or selling livestock in commerce on a commission basis.
 3. The term shall not include a person who buys or sells livestock as part of his own bona fide breeding, feeding, or dairy and/or beef operations and is not engaged in the business of buying, selling, trading, or negotiating the transfer of livestock, nor a person who receives livestock exclusively for immediate slaughter on his own premises.
- X. Auctioneer A person who sells or makes a business of selling livestock at auction.
- Y. Auction A public sale of livestock to the highest bidder.
- Z. Commission Firm A person, partnership, or corporation who buys and sells livestock as a third party and reports to the seller and/or to the buyer details of the transactions. This includes any such person or groups whether or not a fee is charged for the service.
- AA. Commission Sales Those sales which are conducted by a third party, who reports to the seller and/or to the buyer details of the transactions.
- BB. Certificate An official document issued by a Veterinary Services representative, State representative, or accredited veterinarian at

the point of origin of a shipment of domestic animals which shows the official eartag, individual animal registered breed association registration tattoo, or individual animal registered breed association brand number, or registration number or similar identification of each animal to be moved, the number of animals covered by the document, the purpose for which the animals are to be moved, the points of origin and destination, the consignor, and the consignee. Ownership brands may be used as identification on certificates for cattle being shipped interstate where brucellosis or other official tests are not required, provided the ownership brands are registered with an official brand recording agency and are accompanied by official brand inspection certificates.

- CC. Specifically Approved Stockyard A stockyard specifically approved by the Deputy Administrator for the purposes of the brucellosis interstate movement regulations when he determines that the inspection and handling of livestock at such stockyards are adequate to effectuate the purposes of the regulations and that Veterinary Services and the State in which such stockyards are located have entered into a Memorandum of Understanding setting forth certain standards for such stockyards.
- DD. Recognized Slaughtering Establishment Any slaughtering establishment operating under the provisions of the Federal Meat Inspection Act (21 U.S.C. 601 et seq.) or a State meat inspection act.
- EE. Finished Fed Cattle Cattle in a quarantined feedlot which have been on feed for a sufficient period of time to achieve the flesh condition desired by the slaughter establishments.

chief animal health official, the epidemiologist, and the owner's veterinarian, if requested, will be held to resolve the situation.

When the quarantine is released on the brucellosis affected herd, the owners of the potentially exposed herds, as described above, shall be notified of the desirability of a second negative herd blood test. If the herd owner decides not to have a second test, the representative of the animal health agencies will prepare a statement indicating that the value of a second test was discussed with the owner and listing the reasons the herd was not further tested. A copy of this statement will be given the herd owner.

H. Cleaning and
Disinfection

Premises shall be cleaned and disinfected under regulatory supervision within 15 days following the removal of reactors or the entire herd for slaughter or the requirements of 9 CFR 51 have been met to qualify for Federal indemnity.

I. Classifi-
cation

1. Standard Card Test (standard sensitivity pH 3.8) --
Standard card test results are classified as either negative or positive. The card test is to be used as an official test to classify cattle as reactors only under the circumstances listed below.
 - a. When conditions and time are such that no other test is available, or
 - b. On request of the owner and/or his agent because of time or situation constraints, or
 - c. In livestock markets when the State animal health official specifically designates the card test as the official test in livestock markets. No other test shall be used in livestock markets as an official test in those States where the card test has been given official test status in livestock markets.
 - d. Market Cattle Identification (MCI) test samples are to be tested by the standard card test or an approved presumptive test (BAPA or RST). All presumptive test positive samples shall be retested using the standard card test or standard agglutination test. If the modified card test is used, procedures in Part II, I, 2, should be followed. All samples positive to the standard card test or standard agglutination test, in the absence of further testing, will be reported as MCI reactors and traced to the herd of origin. Non-vaccinated cattle positive to the standard card test will also be reported as MCI reactors for the purposes of State or area classification.

- e. Standard card tests may be used to classify animals as negative on surveillance samples collected at slaughter, on routine samples collected on farms, and on tests of suspicious and affected herds.

Results of the standard card test may be used in conjunction with other test results conducted in the State-Federal laboratory to aid in classification of cattle as reactors.

- 2. Modified Card Test (reduced sensitivity pH 3.3) --
Modified card test results are classified as either negative or positive. Any agglutination in this test is considered a positive result. The modified card test is a buffered card test with antigen sensitivity comparable to a positive reaction at the 1:25 dilution of the rivanol test. Upon acceptance by State Veterinarian and Area Veterinarian in Charge, this test would be used as a diagnostic test for officially vaccinated cattle in all livestock markets in that State. At the livestock market, test-eligible cattle are to be tested by the standard card test or an approved presumptive test (BAPA). Any presumptive test positive sample would be retested using the standard card test. If officially vaccinated animals are positive to the standard card test, they would be retested with the modified card test (pH 3.3). Vaccinated animals positive to the standard card test and negative to the modified card test would be considered suspects and restrictions would not be placed on the balance of the animals. Confirmation testing at the State-Federal laboratory would be continued as prescribed in Part II, A. All such suspects could be returned to the farm of origin under quarantine and retested or be "S" branded and sold. If the herd of origin no longer exists or the owner decides to slaughter the animal(s), the tissues from the suspect animal should be cultured for brucella. Further epidemiological investigation of the adjacent and other contact herds must be conducted to determine if infection is present. The extent of the investigation would be determined by the epidemiologist. Officially vaccinated animals positive to the standard card test antigens will be considered as exposed animals shall be "S" branded or returned to the farm of origin under quarantine. Animals positive to the standard card test are reactors when the standard card test has been conducted.

3. Standard Tube Test (STT) or Standard Plate Test (SPT) --
The blood titers of cattle tested by the STT or SPT methods are classified by use of the following:

Official Vaccinates

1:50	1:100	1:200	
-	-	-	NEGATIVE
I	-	-	NEGATIVE
+	-	-	NEGATIVE
+	I	-	SUSPECT
+	+	-	SUSPECT
+	+	I	SUSPECT
+	+	+	REACTOR

All Other

1:50	1:100	1:200	
-	-	-	NEGATIVE
I	-	-	SUSPECT
+	-	-	SUSPECT
+	I	-	SUSPECT
+	+	-	REACTOR
+	+	I	REACTOR
+	+	+	REACTOR

4. Manual Complement-Fixation Test (CF) --The complement-fixation test when conducted by manual methods approved by National Veterinary Services Laboratories (NVSL) is an official test.

- a. Interpretation of all nonvaccinated test-eligible cattle:

- (1) Fifty percent fixation (2 plus) in a dilution of 1:20 or higher--reactor.
- (2) Fifty per
1:10 but
in a dilu
- (3) Less than
dilution

- b. Interpretatio
including adu
postvaccinati

- (1) Twenty-fi
dilution

- (2) Fifty percent fixation (2 plus) in a dilution of 1:10 but less than 25 percent fixation (1 plus) in a dilution of 1:40--suspect.
 - (3) Less than 50 percent fixation (2 plus) in a dilution of 1:10--negative.
5. Technicon Automated Complement-Fixation Test --The Technicon automated complement-fixation test is an official test when conducted by recognized methods.
 - a. Interpretation of all nonvaccinated test-eligible cattle:
 - (1) Fixation in a dilution of 1:10 or higher--reactor.
 - (2) Fixation in a dilution of 1:5 but no fixation in a dilution of 1:10--suspect.
 - (3) No fixation in a dilution of 1:5 or lower--negative.
 - b. Interpretation of all test-eligible vaccinated cattle including adult vaccinated animals beginning 2 months postvaccination.
 - (1) Fixation in a dilution of 1:20 or higher--reactor.
 - (2) Fixation in a dilution of 1:10 but no fixation in a dilution of 1:20--suspect.
 - (3) Fixation in a dilution of 1:5 or less but no fixation in a dilution of 1:10--negative.
6. Rivanol Test --The rivanol test is an official test when conducted in State-Federal laboratories. Complete agglutination at dilutions of 1:25 or more is a reactor in nonvaccinated cattle and in vaccinated cattle when the complement-fixation test is not conducted. Less than complete agglutination at the 1:25 dilution is negative. Vaccinated cattle showing complete agglutination at dilutions of 1:25 or more will also be reported as MCI for the purposes of State or area classification.
 - a. nated animals with agglutination of 1:50 dilution or less may be classified as reactor if that interpretation is supported by a complement-fixation test result of suspect or negatively accepted complement-fixation test result.
 - b. Complete agglutination in the 1:100 dilution or higher dilutions is a reactor in vaccinated cattle.

Within 5 months postvaccination of adult cattle, a less than complete agglutination at the 1:50 is negative.

7. Semen Plasma Test --The semen plasma test is approved as an official test in bulls for artificial insemination when used in conjunction with another official serological test. The classification of such animals shall be based on the maximum agglutination titer of either the serological test or the semen test.
8. Buffered Acidified Plate Antigen (BAPA) Presumptive Test --BAPA presumptive tests may be used to classify animals negative on surveillance samples collected at slaughter and at livestock markets. Such tests may also be used as presumptive tests for routine samples collected on farms where there is no evidence of brucellosis. On tests of suspicious and affected herds, BAPA tests may be used in addition to other tests.
9. Rapid Screening Test (RST) --The RST may be used as a presumptive test for classifying animals negative in State-Federal laboratories.
10. Supplemental Tests --Supplemental tests are other tests developed to aid in determining the presence or absence of blood components associated with field strains of B. abortus, Strain 19, nonspecific agglutins, etc. Of these, only the card test is an official test when used as the sole test on a blood serum sample. Other procedures include ME (Mercaptoethanol), Coombs, HI at 56° C and 65° C (Heat Inactivation), APA (Acid Plate Antigen) at various pH's, FA (Fluorescent Antibody), ELA (Enzyme Labeled Antibody). Research being conducted may add other supplemental tests from time to time. Interpretation and the use of supplemental tests must be by the designated epidemiologist.

placed in the left ear. Identification of reactors must be accomplished within 15 days of the test date. The time may be extended 15 days for reasons mutually acceptable to the cooperating State and Federal officials in charge.

- K. Identification 1. Exposed--All exposed cattle moving from a premises of origin or from a livestock market to a quarantined feedlot or quarantined pasture, or to slaughter shall be identified by branding with a hot iron the letter "S" (at least 2x2 inches) placed on the left jaw, or high on the tailhead (over the fourth to the seventh coccygeal vertebrae). Identification shall be prior to movement, or exposed cattle on the premises of origin may be identified and permitted to a livestock market where they shall be identified by "S" brand upon arrival. Exposed cattle returned from the livestock market to the herd of origin under quarantine pending further testing are exempt from this "S" branding requirement. Exposed cattle may move with an "S" brand permit from the farm of origin or from specifically approved markets direct to Federal or State inspected slaughtering establishments in a sealed truck without permanent identification by "S" brand as stated in Part II, M. Exposed cattle in herd depopulations shall be "B" branded to qualify for Federal indemnity instead of by "S" branding. An exception is allowed for finished fed heifers moving directly to immediate slaughter and for such cattle when movement to slaughter does not require rail or motor carrier transportation.
2. Untested test-eligible cattle (Part I, D, 2, b)--Such cattle in marketing channels having originated from Class B and Class C States or areas, which are being moved or sold shall be identified and moved in the same manner as prescribed for exposed cattle (see par. 1, above) unless they were part of a Certified Brucellosis-Free herd. Testing of test-eligible cattle is recommended in lieu of "S" branding.
3. Suspects--Cattle classified as suspects which are being moved or sold shall be identified and moved in the same manner as prescribed for exposed cattle (see par. 1, above).

Movements without change of ownership from a farm of origin directly to a livestock market are exempt from the "S" branding requirement, but the cattle must be tested upon arrival or be "S" branded.

requirements and were negative at the time of vaccination. The herd will be eligible for release from quarantine with a negative test 120 days or more following vaccination.

Dairy Herds--All of the foregoing shall apply to "AV" dairy herds. In addition, dairy herds shall either be negative to the last milk ring test or all individual lactating AV dairy animals shall have less than a 1:16 titer by the milk ring test on individual samples of all quarters prior to release from quarantine. Any "AV" dairy herd released from quarantine which continues to be suspicious on milk ring test surveillance shall be evaluated by the designated epidemiologist and monitored with further testing as necessary to ensure that there is no evidence of field strain brucella infection in the herd.

3. Certified Brucellosis-Free Herds--Under this plan, owners of Certified Brucellosis-Free Herds in an area of high risk of becoming infected with brucellosis may request "whole herd vaccination." The purpose will be to establish an immediate high level of resistance to the present or expected exposure from field strain Brucella abortus. Such procedures may be initiated only upon written permission of State and Federal officials directly responsible for program activities in the State in which the herd is located.

In herds of known status; i.e., Certified Brucellosis-Free Herds, the individual herd plan may include the following "whole herd vaccination" procedures in addition to other recognized procedures for prevention or control of the disease:

- a. A blood sample shall be obtained from all test-eligible cattle for serologic testing. If all tests are negative, continue to treat as a Certified Brucellosis-Free Herd at high risk, but if any cattle are reactors, treat the herd as an affected herd and follow the same rules as for known affected herds. (Par. 1, Affected Herds).
- b. In Certified Brucellosis-Free Herds with negative serologic tests, but at high risk, all eligible calves shall be calfhood vaccinated and identified. Within 10 days after serologic testing, all other female cattle shall be vaccinated with a reduced dose of Strain 19 vaccine and identified with an official "AV" (adult vaccination) tattoo in the right ear as

well as the permanent individual official eartag. Following vaccination, only the adult vaccinated cattle will be placed under quarantine. Included in the individual herd plan shall be provisions for the herd to be tested within 30 to 120 days following vaccination, and at not less than 30-day intervals thereafter, until a negative test conducted at least 90 days later than the first negative test 30 days or longer after the last reactor if any, is removed qualifies to release the quarantine. Certified Brucellosis-Free Herd status is suspended while the herd remains under quarantine and is reinstated upon release from quarantine provided field strain Brucella abortus infection has not been diagnosed in the herd. During such period of quarantine, card test negative adult vaccinated cattle in these Certified Brucellosis-Free Herds may move without restriction.

Dairy Herds--All of the foregoing shall apply to "AV" dairy herds. In addition, dairy herds shall either be negative to the last milk ring test or all individual lactating AV dairy animals shall have less than a 1:16 titer by the milk ring test on individual samples of all quarters prior to release from quarantine. Any "AV" dairy herd released from quarantine which continues to be suspicious on milk ring test surveillance shall be evaluated by the designated epidemiologist and monitored with further testing as necessary to ensure that there is no evidence of field strain brucella infection in the herd.

S. Epidemiologic Services

The Brucellosis Eradication Program shall furnish quality epidemiologic services to aid veterinarians and herd owners in brucellosis prevention and control leading toward local eradication. To accomplish this goal, the following epidemiologic-related service shall be instituted:

1. State and federally employed veterinarians having brucellosis program responsibilities shall attend an APHIS brucellosis epidemiology short course or its equivalent within the first year of their assignment. Those currently employed and assigned to this program should also receive this training at the earliest possible date. They shall attend updating courses annually.
2. Accredited veterinarians performing official brucellosis work shall be required to participate in

be considered an acceptable alternative. Acceptance of this alternative will be based on an overall review of the provisions and accomplishments of the State program in achieving the effective traceback of all exposed and/or reactor animals to the herd of origin or other point of original infection.

- V. Administrative Review An administrative review of a State's brucellosis program may involve any of the following:
1. receipt and examination of routine written monthly, annual, and other statistical and narrative reports;
 2. examination of the outcome of existing State policies and procedures for the control and eradication of brucellosis as judged by the prevalence of infection;
 3. special reports prepared in response to specific requests regarding the authorities and the policies for implementing the various minimum standards of the UM&R;
 4. station visits by regional directors, regional epidemiologists and by staff personnel to observe program procedures and to make general or specific purpose program evaluations; and/or
 5. station evaluation teams comprised of several individuals representing State, Federal, and/or industry and academic interests appointed to make limited or comprehensive reviews of the brucellosis program.
- W. Deadline Exceptions Herd plan, investigation, and test deadlines as specified in Part(s) V, VI, VII and VIII shall be followed except when a designated brucellosis epidemiologist determines that extenuating circumstances exist. The extenuating circumstances shall be such as to make the deadline established for a particular herd impossible to meet. A new deadline must be established at the time of this decision to accomplish the required testing at the earliest opportunity. New deadlines established must be consistent with brucellosis eradication principles.
- X. Milk Ring Test Adjustments Adjustments to increase the sensitivity of the BRT are necessary to compensate for the dilution factor in composite milk samples from large dairy herds. By increasing the sensitivity of the BRT, the likelihood of detecting brucellosis recently introduced or maintained in chronic carrier animals is increased.

The desired sensitivity of the BRT is determined by the approximate number of cows represented in the composite herd milk sample.

1. Approximate herd size can be estimated by:
 - a. Dividing the average milk production per cow in the State into the total pounds of milk received by the dairy processing plant from each herd; or
 - b. Recent official blood test record of herd subtracting current estimated number of nonlactating animals.
2. Use fresh milk samples from herds milking 150 or more cows.
3. Adjust BRT milk sample volume to herd size.

Number lactating animals	Test sample
up to 150	1 ml. of milk
151-450	2 ml. of milk
451-700	3 ml. of milk

The BRT may also be adjusted by utilizing 1 ml of milk per 60 cow composite sample.

In herds with more than 700 lactating cows, segment the herd into subunits (25 to 75) and collect composite milk samples from each subunit from the pipeline.

4. Add 0.1 ml. of negative cream (4-6 drops) to each BRT tube regardless of volume of milk used. The negative cream must be obtained from a herd sample representing milk from at least 50 cows to avoid individual difference in creaming quality.
5. Add 1 drop of BRT antigen per test regardless of milk volume.
6. Interpret test results as positive or negative. In the standard 1 ml. ring test, the blue color of the cream layer should be at least as dark as the skim portion of the milk to be considered positive. Only those tubes showing a blue ring darker than the skim milk should be interpreted as positive for the 2 ml. and 3 ml. tests.

Y. Identifi-
cation of
Spayed
Heifers

Spayed heifers may be officially identified by applying a hot iron brand to either or both jaws using an open spade design, as used in playing cards (♠), of not less than 3 inches high.

C. Standards
to Attain
and Maintain
Class Free
Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. A State may increase the frequency of milk ring testing to obtain more effective surveillance. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 15 days of the laboratory test date. Initial herd blood tests of the entire test-eligible herd should be completed within 30 days of the laboratory test date. Loss of Class Free status may occur if the herd test is not conducted on time.

Patron lists shall be reviewed to ensure that all dairy herds producing commercial milk have been included in at least three of the four BRT rounds per year. The quality of the samples used for the milk ring test will be monitored at the time of collection. The milk ring test procedure will be adjusted in accordance with herd size. (See Part II, X.)

b. Market Cattle Identification Program (MCI)

- (1) Coverage - All State or federally inspected slaughtering establishments must participate in the Market Cattle Identification program. The rate of sampling of test-eligible market cattle shall be at least 95 percent at each State or federally inspected slaughtering establishment. In cases where the 12-month collection rate is below 95 percent for specific plants, the actions taken to correct the existing situation will be evaluated in determining status. Manmade identification (except brands and tattoos) on test-eligible cattle at time of slaughter are to be collected and shall accompany the laboratory identification has many market trace ready to the laboratory identification considered is collected

- (2) Reactors
reactors
traced to
conducted

15 days of official notification. In States with 20 or fewer MCI reactors, a special review may be made of justification for failure to meet tracing of 90 percent of reactors to herd of origin. When a herd blood test is indicated, it should be conducted within 30 days of official notification of market cattle test reactors or the herds are to continue to be confined to the premises under quarantine. (For exceptions see Part II, W.) Loss of status will occur if the herds of origin of rivanol or CF test positive market cattle reactors are considered suspicious after a complete epidemiologic investigation and are not tested within 6 months of official notification of the market cattle reactor.

- (3) Reporting results - All MCI reactors originating in the reporting State, including the successful and unsuccessful tracebacks and blood tests of the herds of origin, are to be reported in the annual report to maintain status. The data summarizing the successful and unsuccessful tracebacks for cattle with backtags and for cattle without backtags should be presented separately.

c. Epidemiologic Surveillance

- (1) Adjacent herds - All adjacent herds or other herds having contact with imported cattle containing a reactor(s) shall have an approved action plan for testing or monitoring the herd(s). Such plans must be in effect within 15 days of disclosure of reactors in the index herd and include at least two herd tests with the last herd test approximately 6 months after the index herd is depopulated or freed of infection. (For exceptions see Part II, W.) If disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian, if requested, will be held to resolve the situation.
- (2) Epidemiologically traced herds - All herds found by epidemiological tracing to have sold cattle into an infected herd and all herds found by the same means to have received cattle from an infected herd should be placed under quarantine

and must have an action plan for testing or monitoring the herd. Such plans must be in effect within 15 days of locating the source or recipient herds and any testing required should be performed within 30 days of disclosure of herd association. (For exceptions see Part II, W.) If disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian, if requested, will be held to resolve the situation.

2. Herd Infection Rate

- a. States must remain free from field strain B. abortus infections for 12 months or longer. If reactor animals are disclosed in an imported lot of cattle and no spread of brucellosis has occurred to other herds prior to the immediate destruction or return of the exposed animals, the entire lot can be depopulated or returned to the State of origin without loss of status. Infections are assumed to be caused by a field strain until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation that excludes field strain infection.
- b. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 15 days to identify the potential sources of infection. All potential sources shall be contacted to determine appropriate action within 15 days. Extenuating circumstances causing delays in contacting potential source herds must be documented in the case report submitted to Veterinary Services, Hyattsville, Maryland.

3. MCI Reactor Prevalence Rate

States should maintain a 12-month adjusted MCI reactor prevalence rate not to exceed one reactor per 2,000 cattle tested (0.050 percent). For purposes of State or area classification, MCI reactors are defined as non-vaccinated cattle positive to the standard card test and vaccinated cattle positive to the rivanol test at 1:25 or greater or positive to the modified (reduced sensitivity) card test. The adjusted MCI reactor prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, market cattle reactors traced to out-of-State origins,

and market cattle reactors originating from herds of origin in which all test-eligible cattle were subsequently tested and found negative for brucellosis. A complete epidemiologic investigation with appropriate test of adjacent and contact herds will be conducted on any herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter. Extenuating circumstances causing the rate to be above the stated rate must be documented in the annual report. Special consideration will be allowed when the status of a State or area is affected by unusual or extreme marketing conditions.

4. Uniform Methods and Rules Compliance

- (a) States must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- (b) Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class A status. Prior to reduction of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Herd infection in other than quarantined imports due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of Class Free status and result in reclassification of the State to Class A status. Class Free status may be regained by qualifying as for initial Class Free status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement of Cattle on Change of Ownership Within and From Class Free States or Areas for the Following Purposes

1. Feeding

- a. Interstate movement into quarantined feedlots or quarantined pastures. Intrastate movements are not applicable because such premises are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement. An "S" brand permit is required for such movement.

(2) Test-eligible cattle from other herds, including Certified Brucellosis-Free Herds, may move to quarantined feedlots in other States without test restrictions but a certificate (Part I, BB) is required.

b. Movement into other feedlots (Inter or Intrastate) - Requirements are the same as for breeding cattle.

2. Immediate slaughter (Inter or Intrastate)

a. Exposed animals from a quarantined herd must be "S" hot iron branded, "B" hot iron branded if the herd is being depopulated with indemnity, or moved in sealed vehicles directly to slaughter. A VS Form 1-27 is required.

b. Other cattle may move to slaughtering establishments or to markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

3. Breeding cattle (Inter or Intrastate)

a. A certificate is required for interstate movements but there are no premovement test requirements. A voluntary test between 45 and 120 days postmovement is recommended following interstate movement.

b. It is recommended that all female breeding stock moving interstate be calfhood vaccinated.

Female dairy cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class B State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

All female cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class C State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

Female cattle
vaccination at
may be moved :
approved stock
arrival at the

PART VI
Class A Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved; official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification. Additionally, Part III, E, provides for Federal quarantines within a State:

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State;

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests (report slaughter MCI and all other MCI separately);
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and tested with negative results; to out-of-State origins; to known infected herds;
7. Number eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals.

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of mammary identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for the higher class.

C. Standards
to Attain
and Maintain
Class A Status

1. Surveillance
 - a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. A State may increase the frequency of milk ring testing to obtain more effective surveillance. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 15 days of the laboratory test date. When required the initial herd blood test of the entire test-eligible herd should be completed within 30 days of the laboratory test date.

- same means to have received cattle from an infected herd shall have an approved action plan for testing or monitoring the herd. Such plans must be in effect within 15 days of locating the source or recipient herd(s). (For exception see Part II, W.)
- If a disagreement occurs regarding the necessity for testing a herd, consultation between the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 30 days of disclosure of association with the infected herd. (For exceptions see Part II, W.)
- Loss of status to Class B status may not occur if legal action has been taken by the State to obtain a test and active legal proceedings are in progress.

2. Herd Infection Rate

- a. States must not exceed an accumulated 12-month herd infection rate due to field strain B. abortus of 0.250 percent or 2.5 herds per 1,000 except in States with 10,000 or fewer herds. Infection with field strains must be assumed in each case until veterinary officials in the State show otherwise by culture or by complete epidemiologic investigation. Each infected herd must be enrolled in a program which results in the elimination of brucella infection or depopulation. Herds proven to be infected with Strain 19 are deleted from this calculation but the infected animals are to be sold for immediate slaughter. A special review will be made to determine if a State having a herd infection rate exceeding 0.250 percent but less than 10,000 herds should qualify for Class A status. This evaluation will include but not be limited to consideration of the following factors:

- (1) The number of reactor herds assumed (or proven) to be due to field strain of Brucella sp.;
- (2) The location of the infected herds and the distances between them, i.e., clusters of infected herds or scattered infected herds;

- (3) Whether the herds have a common source(s) or are separate outbreaks and whether secondary spread has occurred;
 - (4) Whether State policies and authorities are adequate and are applied to control and eliminate the outbreak(s);
 - (5) Adequacy of the herd quarantine(s) and its enforcement;
 - (6) Number of additional herds at risk of contracting brucella infection;
 - (7) Whether depopulation has been used to contain the outbreak(s); and
 - (8) The effectiveness of herd management practices in the infected herds to control disease spread within the herd and to other herds at risk.
- b. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 15 days to identify the potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 15 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

States should maintain a 12-month adjusted MCI reactor prevalence rate not to exceed one reactor per 1,000 cattle tested (0.100 percent). For purposes of State or area classification, MCI reactors are defined as nonvaccinated cattle positive to the standard card test and vaccinated cattle positive to the rivanol test at 1:25 or greater or positive to the modified (reduced sensitivity) card test. The adjusted MCI prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, market cattle reactors traced to out-of-State origins, and market cattle reactors originating in herds in which all test-eligible cattle were subsequently tested and found negative for brucellosis. A complete epidemiologic investigation with appropriate test of adjacent and contact herds will be conducted on any herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter. Extenuating circumstances causing the rate to be above the stated

rate must be documented in the annual report. Special consideration will be allowed when the status of a State or area is affected by unusual or extreme marketing conditions.

4. Uniform Methods and Rules Compliance

- a. States must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class B status. Prior to removal of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Excessive herd infection rates due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of status to Class B status. Class A status may be regained by requalifying as for initial Class A Status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement of Cattle Within or from Class A States or Areas for the Following Purposes

1. Feeding

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movement into quarantined pastures. Interstate movement to Class Free States is not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.
 - (2) Untested test-eligible cattle from other herds (including Certified Brucellosis-Free Herds) may move interstate or intrastate to quarantined feedlots or quarantined pastures without test

restrictions if origin is maintained by means of identification tags, backtags, or brands. A certificate is required for interstate movement. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter at recognized slaughtering establishments and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.

- b. Movement into other feedlots - Requirements are the same as for breeding cattle.

2. Immediate slaughter

- a. Exposed cattle from quarantined herds shall be "S" hot iron branded and moved with "S" brand permit to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets or a farm of origin in sealed vehicles accompanied by an "S" brand permit. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter at recognized slaughtering establishments and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.
- b. Cattle from nonquarantined herds may move to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

3. Breeding Cattle

- a. Test-eligible cattle from Certified Brucellosis-Free Herds can move without test requirements if identity to source is maintained. A certificate is required for interstate movement.
- b. Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) may move intrastate for breeding purposes without test restrictions. A voluntary test in 45-120 days postmovement is recommended.

PART VII
Class B Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved; official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification.

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State:

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests (report slaughter MCI and all other MCI separately);
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and tested with negative results; to out-of-State origins; to known infected herds;
7. Number eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals;

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of marmade identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for higher class.

C. Standards to Attain and Maintain Class B Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. A State may increase the frequency of milk ring testing to obtain more effective surveillance. An epidemiologic investigation of all herds with suspicious milk test results shall be conducted and an approved action plan developed within 30 days of the laboratory test date. When required the

status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

- (2) Epidemiologically traced herds--All herds found by epidemiological tracing to have sold cattle into an infected herd and all herds found by the same means to have received cattle from an infected herd shall have an approved action plan for testing or monitoring the herd. Such plans must be in effect within 45 days of locating the source or recipient herd. (For exceptions see Part II, W.) If a disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 60 days of the disclosure of association with the infected herd. (For exceptions see Part II, W.) Loss of Class B status to Class C status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

2. Herd Infection Rate

- a. States must not exceed an accumulated 12-month herd infection rate due to field strain B. abortus of 1.500 percent or 15 herds per 1,000 except in States with 1,000 or fewer herds. Infection with field strains must be assumed in each case until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation. A special review will be made to determine if a State having a herd infection rate exceeding 1.500 percent but less than 1,000 herds should qualify for Class B status. This evaluation will include but is not limited to consideration of the following factors:

- (1) The number of reactor herds assumed (or proven) to be due to field strain of Brucella sp.;
- (2) The location of the infected herds and the distances between them, i.e., clusters of infected herds or scattered infected herds;

- (3) Whether the herds have a common source(s) or are separate outbreaks and whether secondary spread has occurred;
 - (4) Whether State policies and authorities are adequate and are applied to control and eliminate the outbreak(s);
 - (5) Adequacy of the herd quarantine(s) and its enforcement;
 - (6) Number of additional herds at risk of contracting brucella infection;
 - (7) Whether depopulation has been used to contain outbreak(s); and
 - (8) The effectiveness of herd management practices in the infected herds to control disease spread within the herd and to other herds at risk.
- b. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 45 days to identify potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 30 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

States must maintain a 12-month adjusted MCI reactor prevalence rate not to exceed 3 reactors per 1,000 cattle tested (0.300 percent). For purposes of State or area classification, MCI reactors are defined as non-vaccinated cattle positive to the standard card test and vaccinated cattle positive to the rivanol test at 1:25 or greater or positive to the modified (reduced sensitivity) card test. The adjusted MCI reactor prevalence rate will be reduced from 0.300 percent to 0.200 percent provided the annual review of the Brucellosis Committee of the United States Animal Health Association supports this change. The adjusted MCI reactor prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, market cattle reactors originating from herds in which all test-eligible cattle were subsequently tested and found negative for brucellosis, and market cattle reactors traced to out-of-State origins. A complete epidemiologic investigation with appropriate test of adjacent and contact herds will be conducted on any herds of origin of MCI reactors in which all test-eligible

cattle have been eliminated by slaughter. Special consideration will be allowed when the status of a State or area is affected by unusual or extreme marketing conditions.

4. Uniform Methods and Rules Compliance

- a. A State must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. A State must make continued progress as judged over a 2-year period in reducing prevalence of brucellosis as determined by epidemiologic evaluation.
- c. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class C Status. Prior to removal of the status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Excessive herd infection rates due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of status. Class B status may be regained by requalifying as for initial Class B status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement
of Cattle
Within or
From Class
B States or
Areas for
the Following
Purposes

1. Feeding

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movements into quarantined pastures. Interstate movements to Class Free States are not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.

(2) Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) must be tested within 30 days before movement, or be "S" hot iron branded and accompanied by an "S" brand permit, or may be moved to a quarantined feedlot directly from a farm of origin without being "S" branded and without being accompanied by an "S" brand permit if such cattle are "S" branded upon arrival at the quarantined feedlot, or directly from a farm of origin to a specifically approved stockyard for sale to a quarantined feedlot without being "S" branded and without being accompanied by an "S" brand permit. Test-eligible cattle moving interstate on an official negative test must also have a certificate.

b. Interstate or intrastate movement into other feedlots - requirements are the same as for breeding cattle.

2. Immediate slaughter

a. Cattle from Certified Brucellosis-Free Herds may move to recognized slaughtering establishments or to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

b. Exposed cattle from quarantined herds shall be "S" hot iron branded and move with "S" brand permit to recognized slaughtering establishments or to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter. In lieu of "S" branding, cattle may move directly to slaughter from a Specifically Approved Stockyard or a State approved livestock market or a farm of origin in sealed vehicles accompanied by an "S" brand permit. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter and for exposed where movement to slaughter does not require motor carrier transportation.

cattle originating in nonquarantined (excluding Certified Brucellosis-Free Herds) directly to recognized slaughtering establishments to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter without "S" hot iron brand or "S" brand permit.

PART VIII
Class C Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved, official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification.

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State:

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests; (report slaughter MCI and all other MCI separately)
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and test with negative results; to out-of-State origins; to known infected herds;
7. Number of eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals.

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of mammary identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for the higher class.

C. Standards

1. Surveillance

Test (BRT) - The milk ring test conducted at least four times per proximately equal intervals. A increase the frequency of milk ring testing to obtain more effective surveillance. An epidemiologic investigation of all herds with suspicious milk test results shall be conducted and an approved action plan developed within 30 days of the laboratory test date. When required the

health official or his representative, the epidemiologist, and the herd owner's veterinarian, if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 60 days of disclosure of association with the infected herd. (For exceptions see Part II, W.)

2. Herd Infection Rate

- a. In States with 1,000 or more herds the accumulated 12-month herd infection rate due to field strain B. abortus exceeds 1.500 percent or 15 herds per 1,000. A special review will be conducted in States with smaller herd populations but with herd infection rates exceeding 1.500 percent to determine if they should be included as a Class C State. Infection with field strain must be assumed in each case until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation.
- b. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 45 days to identify potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 30 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

The 12-month adjusted MCI reactor prevalence rate exceeds three reactors per 1,000 cattle tested (0.300 percent). For purposes of State or area classification, MCI reactors are defined as nonvaccinated cattle positive to the standard card test and vaccinated cattle positive to the rivanol test at 1:25 or greater or positive to the modified (reduced sensitivity) card test. The adjusted MCI reactor prevalence rate will be reduced from 0.300 percent to 0.200 percent provided annual review by the Brucellosis Committee of States Animal Health

The adjusted MCI r
deleting from the
originating from k
reactors originati
cattle were subseq
brucellosis, and n
State origins. A
with appropriate t
be conducted on an
which all test-eli
slaughter. Specia
the status of a St
extreme marketing

4. Uniform Methods and Rules Compliance

- a. A State must maintain effective implementation of the UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. A State must make continued progress as judged over a 2-year period in reducing prevalence of brucellosis as determined by epidemiologic evaluation.
- c. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State as a Federal quarantined area. Prior to removal of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Class C status may be regained when all of the deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement
of Cattle
Within or
from Class C
States or
Areas for
the Follow-
ing Purposes

1. Feeding

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movement into quarantined pastures. Interstate movement to Class Free States is not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.
 - (2) Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) must be tested within 30 days before movement, or be "S" hot iron branded and accompanied by an "S" brand permit, or may be moved to a quarantined feedlot directly from a farm of origin without being accompanied by an "S"

B. Qualifying Standards

1. Size of area--Usually an entire State; counties may validate or revalidate by the area method.
2. Length of status--3 years.
3. Testing period
 - a. Initial validation--18 months immediately preceding request for validation when qualifying by the market testing program or complete herd test method. Twelve months immediately preceding request for validation for alternate method 1 and 24 months when alternate method 2 is used.
 - b. Revalidation--18 months to 3 years depending upon method of qualifying herds.
4. Herd infection rates
 - a. Initial validation--Not more than 3 percent of the herds or one herd, whichever is greater, shall have been found to be infected during the qualification period. There must be no known foci of swine brucellosis in the area at the time of validation.
 - b. Revalidation--There is no acceptable level of infection in a validated State. Indigenous or introduced infection found after the qualifying period will cause loss of status if spread occurs or if the herd is not freed of the disease by testing or depopulation within 6 months. Lost status may be reinstated on the recommendation of the appropriate regional epidemiologist who documents that all deficiencies have been corrected and an effective epidemiological investigation to locate additional infection has been carried out.
5. Animal infection rates--Animal infection rates not considered.
6. Feral Swine--If domestic swine in a State are free of brucellosis under program standards and there is no direct evidence of association between feral swine and domestic swine, a State may be validated, regardless of the brucellosis status of the feral swine in that State. Feral swine include only those wild swine not under the control of man.
7. Suspects--Card test positive swine disclosed in a herd which is otherwise serologically, bacteriologically, and epidemiologically negative may be held under herd quarantine until subjected to subsequent tests to determine the status of the animals.

8. Area status, if excessive infection rates occur--If an area does not qualify because of excessive herd infection rates, a new testing period must be established. All herds in which brucellosis has been known to exist must be legally released from quarantine prior to area validation.
9. Movement of swine into or within Validated Brucellosis-Free Areas for the following purposes:
 - a. Feeding--Feeding swine consigned to feedlots may move into or within validated areas without test provided such swine are maintained in isolation separate and apart from all breeding stock.
 - b. Slaughter--Swine consigned to slaughter may move into or within validated areas without test. Such swine may not be diverted en route for any other purpose.
 - c. Breeding or purposes other than 8, a and 8, b.
 - (1) Swine from Validated Brucellosis-Free herds or herds in Validated Brucellosis-Free Areas--No test requirements. Swine must be moved directly and must not have been in contact with swine of lesser status.
 - (2) Swine from Nonvalidated herds in Nonvalidated Areas--Individual swine from nonvalidated herds in nonvalidated areas must have a negative test within 30 days prior to the date of entry into a Validated Brucellosis-Free Area. These swine must be held in isolation and pass an additional test conducted between 60 and 90 days from the date of the test for entry before being added to the herd.
10. Movement of swine semen for artificial insemination into Validated Areas from:
 - a. Purebred herds from which semen is collected must be validated on the basis of herd blood tests.
 - b. Commercial boar studs from which semen is collected must be validated on the basis of herd blood tests and herd semen agglutination tests.

